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ABSTRACT

Self-regulated learning (SRL) is the process through which individuals direct and sustain their awareness, behaviors, and motivation to optimize their learning or to reach goals. Noting that very little research has been conducted on young children's SRL, this study examined 40 kindergarten children's SRL by investigating: their awareness while watching two videotapes of effective and ineffective problem-solving models; and the relationship between effective problem solving and children's awareness of others' SRL. The self-directed learning task used an apparatus consisting of screws, bolts, and matching holes on a specially prepared wooden stand. Children were invited to complete the task, putting the proper-sized bolt in each of the nine holes and screwing the proper-size nut onto each bolt. After completing the task, each child watched two videotapes. The first interview was conducted while each child watched an effective model videotape in which a child does the task successfully, using self-regulated strategies. The second interview was conducted during and after each child watched an ineffective model videotape in which the child performed the task with a trial and error approach and finally asked for help. Data were analyzed for emerging themes regarding successful and unsuccessful problem-solving approaches. The findings indicated that the 24 successful kindergarten problem solvers were aware of components of others' SRL that are similar to those in previous studies with older students, such as planning, goal setting, and monitoring to achieve certain goals or to solve problems. (Contains 16 references.) (KB)

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Young Children's Awareness of Self-Regulated Learning (SRL)

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Abstract

This study examined 40 kindergarten children's self-regulated learning (SRL) by investigating (a) children's awareness while watching two models' (effective and ineffective) problem-solving video tapes and (b) the relationship between effective problem-solving and children's awareness of others' SRL. Multiple methods including the use of observations, interviews, videotaping, and taking notes, were used to collect data. All data were analyzed using information as suggested by Bogdan and Biklen (1992), and Strauss and Corbin (1990). The results of this study indicate that successful kindergarten problem solvers were aware of components of others' SRL that are similar to those in previous studies with older students, such as planning, goal-setting, and monitoring in order to achieve certain goals or to solve problems. This study provides evidence of kindergarten children's engaging in SRL under certain situations and shows qualitative relations between effective problem-solving behaviors and metacognitive awareness.

Young Children's Awareness of Self-Regulated Learning (SRL)

The main objective of this study was to investigate forty kindergarten children's awareness of others' self-regulated learning (SRL) in a particular context related to problem-solving. Broadly defined, SRL refers to the process through which individuals direct and sustain their awareness, behaviors, and motivation to optimize their learning or to reach goals (Zimmerman, 1990). As active participants in all phases of learning, self-regulated learners engage in such activities as goal-setting, planning, organization, self-monitoring, self-evaluation, and self-awareness (Zimmerman & Martinez-Pons, 1986). Compared to the numerous studies on SRL in older students and adults, there has been little research on young children's SRL (Hoard & Clark III, 1992; Kanfer & Karoly, 1972; Kopp, 1982, 1988; Mischel & Patterson, 1979). Therefore, our understanding of kindergarten children's SRL is still largely based on research either concerning young children's metamemory or concerning SRL with older students and adults (Hoard & Clark III, 1992; Hwang, 1998; Gelman, 1979).

To truly understand what it means to become a self-regulated learner, studies need to examine young children's self-regulated learning as part of a gradual developmental self-regulation process. Hence, this study provides a clearer understanding of kindergarten children's SRL by investigating (a) children's awareness while watching two models' (effective and ineffective) problem-solving video tapes and (b) the relationship between effective problem-solving and children's awareness of others' SRL.

Method

Participants

Forty kindergarten children (22 boys and 18 girls) were selected as participants in this study. All 40 children attend a primary school located in a southern states. A total of 165 parental permission forms were distributed and 40 were returned. The mean age of the children was 67.89 months (Range: 63-75; SD = 4.06 mo.).

Instrumentation

Self-directed learning (SDL) task. This instrument was designed by Glaubman, Glaubman, and Ofir (1997) to test the quality of kindergarten children's self-directed learning. The SDL apparatus consists of 9 screws, 9 bolts and 9 matching holes on a specially prepared wooden stand.

Interviews. The first interview was performed while each child was watching an effective model video tape in which a child may be seen doing the SDL task successfully, using the self-regulated strategies and putting items in order according to size. While children were watching the video tape, they were asked to talk aloud and verbally explain to the researcher what they were thinking about the model's performance and were probed to examine their knowledge of the model's SRL behaviors. Examples of the interview are as follows: "What is he doing?," "Why is he doing that?" After the children watched the video tape, the researcher asked them for their valuations about the model's performance ("What do you think he did?," and "Why do you think so?").

The second interview was conducted during and after each child saw an ineffective model performing the task with a trial and error approach and finally asked for help. Examples of the interview are as follows: "What is he doing?," or "How is he doing?" After the children watched

the video tape, the researcher asked them a question ("What does he need to do to find out the right place?").

Procedure

Children were invited individually to put all of the nuts and bolts in the right places on the wooden board. Twenty four children out of forty completed the SDL task successfully. They put the proper sized bolt in each of the nine holes and screwed the proper size nut onto each bolt. After finishing the SDL task, each child watched two video tapes (an effective and an ineffective models) was interviewed. The interviews and children's performances lasted approximately 10 minutes. Whole sessions were video taped, and transcribed.

Data Analysis

All of the interviews were analyzed using information as suggested by Bogdan and Biklen (1992), and Strauss and Corbin (1990). Over 30 initial themes for each children's statements and behaviors were generated which dealt with the similarities and differences among the 40 children regarding successful and unsuccessful problem-solving approaches. Each data source was once again examined for instances of confirming and disconfirming support for each of the initial themes. The researchers then compared data sources in order to verify, eliminate and modify. Subsequently, a number of themes were eliminated, some appeared to be confirmed, and the remaining were combined. Analysis was completed when agreement was reached by two researchers.

Results

Interviews about Effective Model's Performance

Planning processes. In general, both successful and unsuccessful children were aware of the effective model's planning process before beginning to put the objects together. However, there was a difference between these two groups in their understanding of the model's planning process. While a few unsuccessful children mentioned their acknowledgments of the relationship among the holes, the bolts, and the nuts, the majority of successful children referred to the specific nature of the task. For example, Scott, one of the successful children explained the effective model's behavior related to the specific nature of the overall task as follows: "He's looking at the things to see what sizes they are. He's trying to put them together...little screws together to see the sizes....He's lining them up to put them in the order to see which one goes where...He's trying to put them together by sizes." In the same manner, John recognized how the planning process affects the model's performance ("He put them in the line. Little, little, medium, medium,.....,bigger, bigger. Oh! I see. He's putting them in the order so he can put these in the right holes"). Just like Scott and John, most of the successful children's awareness of the model's planning process indicated that they understood that the model had a clear goal for the task and comprehended the nature of the task.

On the other hand, most of the unsuccessful children did not refer to their understanding of the specific character of the task nor to the overall goal of the task.

Evaluation of effective mode's performance. All of the successful and the unsuccessful children, except one child, thought the effective model "did a good job."

Most of the successful children's assessments of the model's performance reflected their thinking about how the model completed the task successfully. When they evaluated the model's performance, they suggested various reasons. Common characteristics of these reasons are the

following: (1) the model's understanding of the nature of the task, (2) the model's use of effective strategies, (3) the model's cognitive states. When they described the nature of the task, successful children mentioned their awareness of the model's understanding of the relationship among the items (the holes, the bolts, and the nuts) such as same size among the items and the sequential order of each item. They also understood that the model had a clear goal for the task ("put all of them together in the right places").

Most of the unsuccessful children's reasons reflected their limited understanding about the model's self-regulated behaviors. Most of the children understood that the model had to put the bolt into the hole and to screw them in right places ("He's doing right because he's putting them in right places"). However, none of the children expressed awareness of the model's understanding of the specific character of the task such as the size order for each item or same size among three items (bolts, nuts, and holes).

Interviews about the Ineffective Model's Performance

There was a big difference between the successful and the unsuccessful children in their awareness of SRL processes for the ineffective model's problem-solving.

Successful children's awareness. There were two major themes in successful children's responses regarding to the model's needs to complete the task successfully: Awareness of the critical roles of the monitoring process and recognition to the importance of cognitive states.

The majority of the successful children thought that the model had to monitor his performance regarding the goal of the task ["They (bolts, nuts, and holes) have to be same sizes. He has to look the size to the same as the hole]. In the same manner, Chris mentioned the important role of the monitoring process for successful performance based upon his understanding

of the task ["He has to see how they are. These (bolts and nuts) are the same as the holes and putting things in the holes"]. In Dino's case, he suggested a strategy to figure out the model's problem ("He has to find the biggest and the shortest, and the tallest, and the littlest").

"Thinking" is another major theme in the successful children's interviews concerning about what the ineffective model needed to solve his problems ("To find out the right place, he needs to think. He had to think in his head to put them in the order).

Unsuccessful children's awareness. One of the common behaviors of the unsuccessful children was to demonstrate by themselves with the task or to point to the holes and the bolts on the TV screen what the model had to do. Some of the children understood that the model had to put the items in the right places. However, they did not suggest any self-regulated process such as monitoring or planning. Their recommendations depicted simple behaviors without considering the whole task. Overall, most of the unsuccessful children considered the elements separate from the whole task or focused on simple actions associated with the task.

Conclusion

The results of this study indicate that successful kindergarten problem solvers were aware of components of others' SRL that are similar to those in previous studies with older students, such as planning, goal-setting, and monitoring in order to achieve certain goals or to solve problems (Corno, 1986; Paris & Byrnes, 1989; Schunk, 1986; Winne, 1995; Zimmerman, 1990; Zimmerman & Schunk, 1989). The successful children understood each separate model's action as a part of the whole task and used their own understanding of the nature of the task to interpret the others' SRL strategies. On the other hand, the unsuccessful children did not refer to their

awareness of the specific nature of the task nor to the overall goal of the task. Their awareness of models' SRL behaviors reflected their limited understanding of the task. They seemed to be aware that the effective model's planning process improved the chances of successful completion of the task. However, they did not connect the planning process to the whole task and were only able to be aware of the parts of the model's performances that matched whatever they already understood. It indicates that integrating all of the processes based upon the goals or planning are important feature of SRL related to the successful problem-solving.

With regard to suggesting the strategies to help an ineffective model, successful children considered the monitoring process and cognitive states as important elements in the model's successful work. It indicated that they were aware of SRL processes as important elements for successful problem-solving.

Taken as a whole, the results suggest that under certain circumstances children as young as four years of age are aware of self-regulated behaviors to solve problems. Such findings have implications for a theory of young children's self-regulated learning. Awareness of cognitive strategies may be the most critical element for successful kindergarten children's self-regulated learning, because this study showed that only the successful children were aware of certain cognitive strategies related to reaching their goals.

References

Bogdan, R. C., & Biklen, S. K. (1992). Qualitative research for education: An introduction to theory and methods (2nd ed.). Boston: Allyn & Bacon.

Corno, L. (1986). The metacognitive control components of self-regulated learning. Contemporary Educational Psychology, 11, 333-346.

Gelman, R. (1979). Preschool thought. American Psychologist, 34, 900-905.

Glaubman, R., Glaubman, H., & Ofir, L. (1997). Effects of self-directed learning, story comprehension, and self-questioning in kindergarten. Journal of Educational Research, 90 (6), 361-374.

Hoard, C. E., & Clark III, H. T. (1992). Self-regulatory Behaviors In Preschool Children: Fact or Fantasy? Paper presented at the Annual Meeting of the National Association of School Psychologists, Nashville, TN.

Hwang, Y.S. (1998). Kindergarten Children's Self-Regulation and Their Awareness of Self-Regulated Behaviors. Paper presented at the meeting of The American Educational Research Association, San Diego, California.

Kanfer, F. H., & Karoly, P. (1972). Self-control: A behavioristic excursion into the lion's den. Behavior Therapy, 3, 398-416.

Kopp, C. B. (1982). The antecedents of self-regulation. Developmental Psychology, 18, 199-214.

Kopp, C. B. (1988). The growth of self-regulation: Caregivers and children. In N. Eisenberg (Ed.), Contemporary Topics in Developmental Psychology (pp. 34-56). New York; Wiley.

Mischel, W., & Patterson, C. J. (1978). Effective plans for self-control in children. In A. Collins (Ed.), Minnesota Symposium on Child Psychology (Vol. 11, pp. 199-230). Hillsdale, N.J.: Erlbaum.

Pairs, S. G., & Byrnes, J. P. (1989). The constructivist approach to self-regulation and learning in the classroom. In B. J. Zimmerman & D. H. Schunk (Eds.), Self-regulated learning and academic achievement: Theory, research, and practice (pp. 169-200). New York: Springer-Verlag.

Schunk, D. H. (1986). Verbalization and children's self-regulated learning. Contemporary Educational Psychology, 11, 347-369.

Strauss, A. & Corbin, J. (1990). Basics of qualitative research: grounded theory procedures and techniques. Newbury Park: Sage.

Winne, P. H. (1995). Inherent details in self-regulated learning. Educational Psychologist. 30 (4), 173-187.

Zimmerman, B. J. (1990). Self-regulated learning and academic achievement: An overview. Educational Psychologist, 25 (1), 3-17.11.

Zimmerman, B. J. & Schunk, D. H. (1989). Self-regulated learning and academic achievement: Theory, research, and practice. New York: Springer-Verlag.